ABSTRACT

Methods of amplifying nucleic acid have now been discovered which include the steps of: a) annealing a primer to a template nucleic acid sequence, the primer having a first portion which anneals to the template and a second portion of predetermined sequence; b) synthesizing a polynucleotide that anneals to and is complementary to the portion of the template between the location at which the first portion of the primer anneals to the template and the end of the template, the polynucleotide having a first end and a second end, wherein the first end incorporates the primer; c) separating the polynucleotide synthesized in step (b) from the template; d) annealing a nested oligonucleotide to the second end of the polynucleotide synthesized in step (b), the nested oligonucleotide having a first portion that anneals to the second end of the polynucleotide and a second portion having the same predetermined sequence as the second portion of the primer; e) extending the polynucleotide synthesized in step (b) to provide a terminal portion thereof that is complementary to the predetermined sequence; and f) amplifying the extended polynucleotide using a single primer having the predetermined sequence.. In particularly useful embodiments, the methods are used to amplify a repertoire of IgA antibodies.